In the claims.

1.   A method of automatic generation of horizontal synchronization of an
analog signal to a digital display, comprising:

         finding a number of features;

         for each of a range of test Htotal values,

                calculating a pixel co-ordinate value for each of the found
features;

                determining a pixel co-ordinate remainder value associated
with each of the pixel co-ordinate values; and

                determining a maximum gap value of the pixel co-ordinate
remainder values associated with a true horizontal resolution.

2.   A method as recited in claim 1, wherein the range of test Htotal values
is based upon the first test Htotal value and the second test Htotal value.

3.   A method as recited in claim 1 wherein the determining a maximum
gap value comprises:

         plotting the pixel co-ordinate remainder values in a remainder space
associated with each of the range of test Htotal values; and

                comparing a first selected one of the plotted pixel co-ordinate remainder
values with a second selected one of the plotted pixel co-ordinate remainder values.

4.   A method as recited in claim 3, wherein the comparing is a subtraction.

5.   A method as recited in claim 2 further comprising:

determining if either the first test Htotal value or the second test Htotal value is the true Htotal value.

6.   A method as recited in claim 3, wherein the plotted pixel co-ordinate values are offset by a phase differential.

7.   A method as recited in claim 6, wherein the phase differential is based upon a difference between a true phase and a current phase.

8.   An apparatus for automatically providing a horizontal synchronization of an analog signal to a digital display, comprising:

    means for finding a number of features;

    for each of a range of test Htotal values,

        means for calculating a pixel co-ordinate value for each of the found features;

        means for determining a pixel co-ordinate remainder value associated with each of the pixel co-ordinate values; and

        means for determining a maximum gap value of the pixel co-ordinate remainder values associated with a true horizontal resolution.

9.   An apparatus as recited in claim 8, wherein the range of test Htotal values is based upon the first test Htotal value and the second test Htotal value.

10.   An apparatus as recited in claim 8 wherein the means for determining a maximum gap value comprises:

means for plotting the pixel co-ordinate remainder values in a remainder space associated with each of the range of test Htotal values; and

means for comparing a first selected one of the plotted pixel co-ordinate remainder values with a second selected one of the plotted pixel co-ordinate remainder values.

11.   An apparatus as recited in claim 10, wherein the comparing is a subtraction.

12.   An apparatus as recited in claim 9 further comprising:

means for determining if either the first test Htotal value or the second test Htotal value is the true Htotal value.

13.   An apparatus as recited in claim 10, wherein the plotted pixel co-ordinate values are offset by a phase differential.

14.   An apparatus as recited in claim 13, wherein the phase differential is based upon a difference between a true phase and a current phase.